

MINUTES

The Environmental Review Commission

Tuesday, January 18, 2011 10 A. M., Room 544 Legislative Office Building

The Environmental Review Commission met January 18, 2011 at 10 A. M. in Room 544 of the Legislative Office Building. Co-Chair Representative Pryor Gibson presided. (*SEE ATTACHMENT: Members and Guests Present.*) The Chair noted at the outset that various other meetings taking place today would require Members to go and come during the Commission meeting. He apologized to the Presenters for these interruptions, but noted that reports being presented need to be received prior to the convening of the Session on January 25th.

Without objection on motion from Senator Hartsell the minutes of the May 25, 2010 meeting were approved.

PRESENTATIONS

Water Allocation Study

Richard Whisnant, UNC School of Government said the first report on allocation was made to the Commission two years ago to the day. (*SEE ATTACHMENT: Report to Date.*) Mr. Whisnant said he would present the first part of the report and Bill Holman, of Duke University would deliver the revised recommendations.

Mr. Whisnant said the 2005 Report of the USGS showed that water consumption was rising in North Carolina along with the increase in population, but that consumption was rising faster than population growth. With a finite supply of fresh water at hand, preliminary data developed by a doctoral candidate showed little change in the amount of water available between 1930 and 1970. However, the data from 1970 to 2000 showed that some surface water availability was decreasing, thus at a future time the increased use and shrinking supply would meet.

He said legislation passed in 2010 was being implemented by the Department of Environment and Natural Resources and was being studied by Virginia, South Carolina and Georgia for results that might help those states. Further there is a recommendation in the report that seeks to formalize the Regional River Basin Planning Organizations. Mr. Whisnant said the state was probably too big and too diverse to have a single River Basin Plan. Without legislation, he said that regional water planning groups were springing up across the state: Catawba River, Lumber River, and Jordan Lake Partnership to name a few. He said that while local interests were driving the creation of these groups, the state would need to take the initiative to assure that all basin areas do such planning.

In sum, all the regional groups were projecting future shortages. Thus far there is litigation going on in several areas regarding water needs and he predicted more efforts to bring legislative changes to the Inter Basin Transfer laws. He said that each case would be considered on individual merits, but he urged the Members to consider the large issue of general water allocation. Mr. Whisnant said outcomes for legal cases were unpredictable. He urged DENR to continue efforts to integrate water interests between quality and supply.

The difficulty, he noted was the lack of an apparent “driver” to bring about the integration of supply and quality other than the 2010 statute. He said the Commission should take note that there is ample precipitation in the state’s water system, but not a lot of resilience. For North Carolina to continue to have the secure assurance of an adequate supply of usable water will take further legislative action, he said.

Representative Samuelson asked why court case decisions were unpredictable. Mr. Whisnant said that most water statutes were old dating to the 19th century and early 20th century and some case law was available, but not a lot of legislative direction for judges to use in making decisions.

Responding to a question from Senator Bingham about how widespread the shrinking water resource might be, Mr. Whisnant said he did not know of other studies in other states that might provide such information. He said the causes could be changes in forest cover, land use changes etc. The Senator asked what Mr. Whisnant considered a good job being done by regional water planning groups. He said that groups of people other than water professionals were forming: including elected officials, business people and citizens and thinking ahead about the issues.

Bill Holman, Duke University followed with the recommendations. (*SEE ATTACHMENT: Recommendations.*) He noted an earlier recommendation had been for the General Assembly to adopt goals that would guide judicial and administrative decisions. He said organizations such as the North Carolina Chamber of Commerce and North Carolina League of Municipalities and environment organizations were interested in the idea of permits for large water withdrawals. He said a consensus of the framework had not been achieved, so the recommendation was that work continues with input from various stakeholders on this issue of larger water withdrawal permits.

With the consideration of the now industry known as shale gas, wherein water is pumped into the ground and gas is extracted, the recommendation is that a moratorium on such efforts be place into effect until the hydrologic models had shown the overall effect. The shale gas process uses large amounts of water. He noted that both water and gas are needed, but there should be a protection of existing industries until the effect of this new industry is known.

Mr. Holman recommended that the Commission continue to support hydrologic models for all the State’s river basins. He suggest that the Commission or legislative committees should

consult basin groups such as the Catawba-Wateree area and upper Neuse area to learn more about the problems being experienced and plans to solve those problems.

While DENR is working to coordinate quality and supply, Mr. Holman suggested that the General Assembly require such coordination in the various river basin plans.

In terms of coordinating water quality regulations and reports, he said this has been an earlier recommendation, but this may be the time to see how high a priority such an effort could be. The idea is that fewer reports would come at a certain time rather than many reports arriving piecemeal for consideration, thus allowing for a better look at the overall situation.

Another recommendation is to continue efforts to coordinate the Financial Review of water systems done by the State Treasurer with the Compliance Review done by DENR.

Concerning water efficiency, the recommendation was to look at the Water Stewardship Act from Georgia as a starting point.

There is a recommendation to begin discussions about using something other than treated drinking water for lawns and turf irrigation: the alternatives being reclaimed water highly treated waste water and storm water runoff.

Storage concerns center on examining existing dams and lakes to see what the needs are and are these sufficient for the future. North Carolina and Virginia are in concert now about the use of the water storage area of Kerr Lake. This follows a number of years of legal wrangling over transfers from the Roanoke River Basin. Georgia is also doing off stream water storage, other than reservoirs. There, when a storm happens excess water is “skimmed” off and pumped into other basins for storage.

There is a recommendation that Storm water Programs dealing with water quantity be coordinated with water quality regulations to make sure there are no barriers from the quality standpoint that might run counter to the quantity program. This would help local governments and the private sector.

A recommendation concerning reservoir sites covered the idea that the State might want authority over reservoir sites to protect these sites since it takes years to develop them. This is similar to the Department of Transportation protecting highway rights of way since it takes years to plan and complete water projects the same as with highway projects.

Responding to questions, Mr. Holman said the Georgia Water Stewardship plan was passed in 2010, thus had not had time to show effect, but would make a good plan to study.

Oil and Gas Exploration in the Triassic Basin

State Geologist, Jim Simons introduced the Assistant State Geologist, Dr. Kenneth Taylor who made the presentation. (*SEE ATTACHMENT: Shale Gas Potential: Who Knew?*)

Based on U. S. Geologic Surveys the Dan River Basin and the Deep River Basin show potential rock formations that could produce natural gas. An additional site in Bertie County has shown to have similar rock formations, but is not considered a potential site.

The Deep River Basin runs for 150 miles in North Carolina, running northeast to southwest into South Carolina. It is estimated that there is about 7000 feet of Triassic shale in the basin. There is about 59,000 acres worthy of exploring. The three things that need to be found are:

- Source rocks
- Seal to keep things in place
- Reservoirs to explore.

There is a formation called the Cumnock Formation near Sanford which has an 800 foot thick section of shale suitable for exploration. The area has produced coal since before the Revolution and into the 1920s. The coal mine explosion which occurred here 1925 was caused by natural gas. Organic chemistry data was published in 2008 which preceded study to see if there was enough organic carbon present to produce natural gas and had the carbon been “cooked” enough and long enough to produce natural gas or oil. Dr. Taylor said that answer for part of this area is “yes”. Samples have been taken at two wells in the 59,000 acre area and those samples show a saleable product now.

The new technology of horizontal drilling and hydraulic fracturing has been found to work in other states for unconventional energy sources. The State geologic department has provided data to the USGS for a study to determine the upper and lower limits of this field. That report should be published in the spring.

Robin Smith, Assistant Secretary for Environment at DENR made the presentation on the regulatory side of this issue. She explained how the natural gas could be extracted. Hydraulic fracturing is a process using liquid, mostly water, pumped down into the shale formation to fracture the shale and allow the gas to be extracted. The hydraulic fluids include chemicals other than water and sometimes particulate matter to keep the hole open. The EPA asked the drilling companies to disclose the chemicals in their fluid. While some did make disclosure, others did not setting issue of proprietary rights to these formulae. She said this raises the issue of disposal of the fluids.

There is another issue: water quantity. The exact amount of water used is not known. She said one expert had predicted it would take 4 million gallons of water per well over the life of the well. The frequency of use is not known at all. She said this was a significant amount of water.

The issue of ground water contamination must be considered, too. She said this involved the liquids used to do the fracturing and that discharge, plus the possibility of leakage of natural gas into the ground water. After Pennsylvania experienced an episode of methane leaking into drinking water wells and one fracturing site which blew out discharging the drilling liquid into the air, that state has strengthened its rules concerning these operations. She said there were some recommendations for the casing of the wells: methane leakage into the well water in Pennsylvania was traced to a failure in the casing.

She said that the process could be done in a way to minimize all the various issues, but in her words it is an issue “to tread in very carefully”.

There are also issues of solid waste and hazardous waste concerning storage of chemicals prior to use and the discharge of the same.

She said the statutes and rules in force now tend to be barriers to hydraulic fracturing. The laws prohibit horizontal drilling and restrict injection certain materials into groundwater. She said if this is removed, it needs to be considered very carefully.

Other issues are not as environmentally significant. She said the current license fee for a well is \$50, an old figure. There will be concerns for a potential drill site as far as roads, well pads, pipelines etc.

All in all there is no existing regulatory program that would manage the impact of such a process.

Responding to a question from Representative Harrison, Ms. Smith said there were no specific recommendations at this time. She said there is a working group within DENR that is doing individual and collective research seeking to provide the Department with information on the process. She said they were looking at the experience in other states, information from industrial firms, nonprofits who have knowledge on the operations and others. She said there were plans to issue a white paper on the issue at a later time. Representative Harrison said she was particularly concerned about the ground water and asked if a groundwater inventory would be done around the proposed site. Ms. Smith said other states required the company which proposed the plan to do the area groundwater survey. Drinking water is inventoried and most of this takes place prior to granting of a permit for the drilling.

Representative Samuelson asked if the high water quantity is at the beginning or all through the operation the well. Ms. Smith said the amount varied with the drilling process since drilling at one site could send fractures in several directions.

Senator Bingham asked about royalties paid in other states. Mr. Taylor responded saying that of the 45 states that collected oil/gas royalties, North Carolina ranked seventh from the bottom. Kansas was the highest at 17%.

In discussion of state’s old law prohibiting horizontal drilling, Mr. Taylors said that was to keep someone from stealing the resource from an adjacent land owner.

Before the next presentation, Chair Gibson aid the National Conference of State Legislatures was presenting a webinar on the issue of fracking and we would provide members with the website.

Issues & Concerns of DENR Water Quality

Tom Reeder, Director of the Division of Water Resources, outlined his presentation to cover the Supreme Court Decision in a lawsuit with South Carolina, Implementation of Session 2010- 143 dealing with river basin modeling and replenishment of aquifers. (*SEE ATTACHMENT: Water Quality.*)

The suit brought by South Carolina to protest the use of the water in the Catawba River. The action protested the Concord-Kannapolis Inter Basin Transfer agreement from the Environmental Management Commission. The suit was dismissed by the Supreme Court in December, 2010 and settled. Mr. Reeder noted the various legislative members who had worked on the Catawba-Wateree Bi-State Commission: Senators Allran and Clodfelter and Representatives Alexander and Gillispie. He had particular praise for Senator Clodfelter, saying that he worked with the South Carolina counterparts and saved the state of North Carolina millions of dollars in attorney fees and staff hours.

Mr. Reeder said the settlement did not require North Carolina to do anything that the state was not doing already. The settlement requires:

- Abide by the comprehensive re-licensing agreement of Duke Energy's license for the Catawba River
- Abide by existing statutes on any future inter-basin transfers on the Catawba River. South Carolina actually must adopt the same statutes to abide by the settlement
- Evaluate water supply needs for Catawba-Wateree every 10 years—already in our statutes.

Efforts are continuing on implementation of the Hydrologic Modeling for all 17 river basins. He said the requirement for ecological flow data was not yet in place, but in progress. An Ecological Flow Management Board has been established. And the models will be approved by the Environmental Management Commission. This is the first time for the EMC to approve models as such, so a technical advisory board from the EMC is working with staff to guide the creation of the models. The first model should be approved in the fall of 2011, either for the Tar or Broad river basin.

Mr. Reeder said that there was progress being made in the recovery of the aquifers in the central coastal plain. Progress is due in large part to several users switch over to surface water

use. The users are following the capacity use rules in making the changes. In addition the aquifers in Gates, Hertford and Northampton Counties were recovering following the closing of the International Paper Company plant in Franklin County, Virginia.

Interbasin Transfers are already approved for Charlotte-Mecklenburg, Concord-Kannapolis, Randleman, Jordan Lake and Greenville Utility. The idea of a transfer from Kerr Lake is causing concerns in Virginia. Mr. Reeder said the NeuseWASA in Kinston may seek a transfer approval. That utility switched from groundwater to surface water and built a state of the art water treatment plant and incurred \$150 million in debt. Now the utility cannot sell all the water they need to pay down the debt because of the Interbasin Transfer statute.

Concerning the Kerr Lake situation, Mr. Reeder said discussions continue on dividing the unallocated water in the Lake. There is about 50 million gallons per day to be allocated. Other issues to be considered during 2011 include the Little River Reservoir for Raleigh and allocations of water in Jordan Lake.

Water Quality

Colleen Sullins, Director of the Water Quality Division said the structure for water quality was built into the statutes involving the standards and classifications for best use. These standards and classifications are also part of the Clean Water Act.

She said there were several change requests being considered, including one for Hendersonville, another involving the Dan River in the Roxboro/Person County area with impact from Virginia and reclassification of Boylston Creek in Transylvania County as a trout stream. Meetings were held locally about the reclassification efforts for Boylston Creek.

Federal law requires the updating on best use standards every three years and is an ongoing process. Ms. Sullins said the legislators might expect to hear about the updating of metal standards. The EPA approved metal standards ten years ago, but North Carolina has not implemented the update. She said the new standards were more stringent and will cost more for communities to implement.

Requirements by EPA for states to adopt nutrient criteria implementation is causing concern nationally and in various states. The criteria would have the states set nitrogen and phosphorous level standards. Recently the EPA had the standards put in place in Florida, because the state did not seem to be moving quickly enough. North Carolina will hold a forum to discuss nutrient levels management.

The Environmental Management Commission has approved a management strategy for Falls Lake based on the proposal from the Division of Water Quality. Implementation allows for modification in the future if this is needed.

Ms. Sullins said there could be interest raised for legislators concerning nutrients in the High Rock Lake system.

The Division issues various permits and one that has sparked interest involves the Western Wake County Waste Water Treatment facility and the discharge permit. This is also connected to an Interbasin Transfer issue for Jordan Lake.

The Environmental Management Commission has updated rules for pre-treatment which affects treatment facilities which have large amounts of industrial waste coming into its system. The changes streamlined the process of the pre-treatment requirements.

Non-discharge permits also come under the Division. These are animal wastes, spray irrigation and the like. A proposed poultry processing plant by Sanderson Foods would come under the Divisions jurisdiction for permits.

On the issue of reclaimed water rules, there has been an objection by members of the container nursery community which may be an issue for the General Assembly.

The Division will be working with communities to implement new federal regulations on storm water. The new rules have moved from a best management practices standard to a limitation position.

In monitoring the Division is working to make sure goals are being met. The Division meets with the Division of Air Quality when it comes to mercury discharges and mercury in fish tissue. Management strategies are also monitored for such facilities as Falls Lake and Jordan Lake.

In the discussion, Ms. Sullins answered a question from Representative Samuelson saying a storm water limitation approach was like a speed limit; reducing the amount of flow. Concerning ecological flow, Ms. Sullins said the state has been measuring the quality of water needed to sustain aquatic life, but now there is need to measure the amount of water needed for such life. Regarding level of metals in water supplies, she said the EPA has learned the level of metals in the water relative to damaging aquatic life, but those standards had to be adapted to the type of water in a given area of a state.

Senator Hartsell asked about the rejection of a water quality permit concerning the Yadkin River and Badin Lake. (He said some members of the Commission were thankful for that decision.) Ms. Sullins did revoke a 401 permit that had been issued for Alcoa and Badin Lake and the dams on the Yadkin River. She said the matter was in litigation which limited what she could say. She did say the revocation was based on the hearing when testimony showed that Alcoa had withheld information that was material to granting the original permit. Alcoa has until the first of February to appeal the revocation. Meanwhile, litigation on the original action to grant the permit has been stayed pending action on the revocation matter.

Chair Gibson suggested that further discussion on the issue be delayed. Senator Hartsell said he would defer additional questions that he might have and asked that material submitted to the Senate Judiciary II Committee be included in the ERC files along with a recent letter on the subject. He said he wanted this as part of the record concerning action on the permit. The Co-Chairs agreed to that request.

Representative Harrison asked about standards for a chemical known as PFOA manufactured in North Carolina by Du Pont. Ms. Sullins said there was work being done concerning standards for the chemical, but did not have specifics at this time.

Ms. Sullins said the effect of coal ash on groundwater was being reviewed as part of the renewal of permits for groundwater.

Waste Management

Dexter Matthews, Director of the Waste Management Division began with a law suit that challenged provisions of SB1492 which was passed in 2007. That law required buffers around solid waste landfills and the size of these facilities. The suit challenged on constitutional grounds the provisions were a pretext for banning interstate commerce. The allegation was that these were provisions which proposed to ban the receiving of out of state waste. Following a summary judgment in Wake County upholding the state's position and dismissing the suit entirely, Waste Industries has appealed to the Court of Appeals which should render a decision this fall. The losing side can still seek a review of the case in the North Carolina Supreme Court. And since the suit addresses some issues never covered in federal law, the matter could go to the U. S. Supreme Court.

Concerning the issue of coal ash, the EPA issued new rules for coal combustion residuals after the failure of an impoundment in Tennessee. Because of the types of containment of the residuals, the Division of Waste Management, Division of Water Quality and the Division of Land Resources are severally involved in this issue. The three Divisions reviewed the EPA rules and submitted comments to the federal agency. The Division considers the EPA rules unsatisfactory, therefore the Division seeks to have EPA treat coal combustion residuals as solid waste and provide states with financial incentives to regulate them as solid waste to recognize state permitting requirements for the substances.

Mr. Matthews provided the Commission with an extensive review of efforts to deal with the effects of perchloroethylene used in dry cleaning processes. The chemical has been found in groundwater and soil samples near dry cleaning operations and inside the buildings of these plants. Testing for EPA accepted levels was done in dry cleaning plants, drop-off points, building adjacent to such plants and buildings that had been used in dry cleaning, but no longer used that way. The Department of Labor puts the regulation for these plants under the

Occupational Safety and Health Administration. OSHA limits for possible contamination are higher than those of EPA. An issue-oriented working group of various stakeholders has been formed and Mr. Matthews said a report should be complete by the end of 2011.

In discussion, Senator Hartsell was advised that 9 sites had been closed during the implementation of dry cleaning site cleanup and 16 more were in the final process. The report is on the ERC website.

Senator Hartsell asked about any update on a 2001 report on the Badin smelter which showed hotspots for cyanide, arsenic and PCBs. At that time Alcoa said that none of these hotspots needed to be remediated. Owing to the continuing litigation, Chair Gibson suggested that the Department should address that issue, rather than seeking information from any one Division. Mr. Matthews did say that the Division was working with the EPA on PCB cleanup, but that DENR had not done any additional testing of its own.

Representative Harrison asked if the Division felt confident that toxins contained in recycled coal ash remained inert. Mr. Matthews said that the technical standards for hazardous and solid waste are similar and should be effective.

Members will be furnished a staff report on the conditions concerning the contamination of water wells at Camp Lejeune.

Air Quality

Sheila Holman, Director the Air Quality Division appeared before the Commission for the first time after she succeeded Keith Overcash, who retired after 37 years of state service. (*SEE ATTACHMENT: Air Quality.*)

She said that air quality in North Carolina continues to improve. This she attributed to both state and federal efforts. She said ozone levels were declining and the fine particle levels (PM 2.5) were lower due in large part to the North Carolina Smoke Stack law.

EPA was due to deal with changes in ozone standards in 2010, due to a difference in the recommendations of a science panel chosen to recommend the level and the final EPA standards which were higher than those recommended. EPA asked for extension to revisit the panel's recommendations and after several delays should report the new ozone standards by July 2011. Depending on the standard set North Carolina could find all its air quality monitors out of compliance since the new standards are expected to require lower levels.

Of the five sulfur dioxide monitors in the state, the monitor in New Hanover County is in violation of the latest EPA standards. The Air Quality Division is working to learn the reason for

this and the Division has asked 22 area companies to supply models of their individual monitoring standards in seeking the answer.

Following a court decision in 2007 which vacated boiler air quality rules, EPA is developing new rules which could affect about 250 North Carolina sites. These are not utility company boilers. Requirements to learn how the standards are set in the first place are one question to be resolved. The new rules should be put forth in 18 months. Currently one provision covers the event of the EPA failure in regulating these boilers, and after a court case and advice from the Attorney General's office, the state is proceeding with its permitting process and has completed about 80% of the applications.

The proposed Titan Cement plant in New Hanover County ran into a court suit contesting if environmental rules were counter to state offered incentives. A court ruling said environmental rules did apply. DENR was enjoined from any permitting action. Titan then sought and received separation from state incentives and a December court ruling dissolved the injunction filed by DENR. Titan is preparing an updated permit application which will need to comply with some new standards in place since the original application in 2008.

Currently Green House Gas permitting is under legislative review. North Carolina's rule which tailor the permits to the state's situation was approved by the Environmental Management Commission and the Rules Review panel. The proposal would raise state thresholds and the Commission and Rules approved brought some 19 letters of objection.

North Carolina is in litigation over the declaration of 4 TVA plants as being a nuisance for North Carolina citizens. The Federal 4th Circuit ruled that the Clean Air Act trumped the consideration of the plants as a nuisance for citizens. The N. C. Attorney General's office has been denied a re-hearing, but granted an extension to file the issue with the U. S. Supreme Court. That filing is under consideration at this time.

Responding to a question posed by Senator Bingham, Ms. Holman said air quality standards being applied in North Carolina are the same as the rest of the country and would not put the state in a class of having more stringent rules.

ENVIRONMENTAL FUNDING

Claire Hester, Fiscal Analyst provided the Commission with the financial picture. (*SEE ATTACHMENT: Environmental Funding.*) The review provided information on the various programs including the trust funds involved in the financial mix. After a dip in funding the appropriations had begun to climb until the last three fiscal years. Special funds showed cash

balance of \$670 million in 2009. Transfers from these cash balances have been used to help balance the budget. Ms. Hester said \$170 million transferred out in FY 2008-09.

Over recent years some programs have either been eliminated or consolidated in efforts to achieve budget restrictions. Additionally certain vacant positions were eliminated as budgetary matters.

The various environmental trust funds have seen reductions either from direct cuts vis a vis previous funding. The Clean Water Trust Fund had been funded at \$100 million in recent years, but was cut to the \$50 million in the current budget. The National Heritage Trust Fund and the Parks and Recreation Trust Fund have seen a decline in funds. Both receive money from the deed stamp tax, but allocations from that tax have been reduced over recent years. Special license plate fees going to these funds are declining or showing no increase.

The Governor ordered Cabinet Departments to withhold 3.5% of funds. The targets meant a reduction in grants and program reductions. Cabinet Secretaries had flexibility where to make cuts. Divisions in DENR with cuts over a \$1 million include:

Aquariums

Environmental health

Forest Resources

Marine Fisheries

Water Quality

State Zoo

Parks and Recreation

Non-profits

Changers made included closing two State Parks, reduction in hours for other State parks and contracting the operation of the gift shop at the State Zoo. Other programs such as the Well Drillers Program, Oyster Sanctuary and an Animal Waste System pilot were eliminated.

As requested by the Governor the Agencies provided the Office of State Budget and Management with scenarios for 5%, 10% and 15% reductions. Those scenarios would mean between \$10 million and \$30 million reduction for DENR.

During questions from members of the Commission it was noted that the various reports from all the Divisions were available on line with executive summaries as a guide for more specific interests. Ms. McGinnis said there were no specific reports which might indicate a particular “surprise” for the Members to consider.

Before adjournment, Senator Bingham added his praise and thanks to Senator Clodfelter for work on the Catawba-Wateree issue. After this, Senator Hartsell joked that perhaps Senator Clodfelter could lend his efforts to issues on the Yadkin River.

The meeting was adjourned by Representative Gibson at 12:34 p.m.

Representative Pryor Gibson, Co-Chair

Minutes by Ted Harrison